REMARKS

Claims 11, 13-15 and 30-34 are currently pending. In the Final Office Action mailed January 11, 2006, the Examiner has maintained the following issues, which are set forth below by number in the order they are addressed herein:

1) Claims 11 and 31-34 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement; and

2) Claim 30 stands rejected under 35 U.S.C. § 102(a) as allegedly anticipated by Hillier *et al.*, GENBANK Accession No. AA402683 (1997).

Applicants thank the Examiner for indicating that Claims 13-15 are allowed. Even so, Applicants hereby amend Claims 11 and 30-34, and enter new Claims 35-40 in order to further the prosecution of the present application and Applicants' business interests, yet without acquiescing to the Examiner's arguments. Applicants reserve the right to prosecute the original, similar, or broader claims in one or more future application(s). The new claims do not introduce new matter. In particular, support for new Claims 35-37 can be found for instance in Example 4 and Figure 7, as well as in the description, which teaches "N- and C-terminal deletion derivatives of IKK-γ (SEQ ID NO:2) were generated and assayed for their ability to effect TNF-responsive and basal IKK kinase activity...both ΔN-IKK-γ (134-419) and ΔC-IKK-γ (1-300) retained the ability to interact with IKKα/β in cells" (Specification, at page 21, lines 18-28). Similarly, support for new Claims 38-40 can be found for instance in the description, which teaches that the "term IKK-γ subunit ...also describes polypeptides having greater than about 65%, 75%, 85%, 90%, 95%, 97%, or 99% amino acid sequence identity with SEQ ID NO:2, said amino acid identity determined with CLUSTALW using the BLOSUM 62 matrix with default parameters (Specification, at page 19, lines 23-32).

1) The Claims Meet The Written Description Requirement

The Examiner has rejected Claims 11 and 31-34 under 35 USC § 112, first paragraph, as allegedly failing to comply with the written description requirement for containing subject matter, which was not described in the Specification in a way as to convey that the inventors had possession of the claimed invention. As discussed in Applicants' reply to Final Office Action

received on March 13, 2006, Applicants have provided working examples of a full length IKK-γ, as well as both N-terminal and C-terminal deletion derivatives having binding activity to one or more of IKK-α, IKK-β and IKK-γ. The Examiner states that Applicants' examples of N-terminal and C-terminal deletion derivatives having a binding activity of a full length IKK-γ polypeptide are not persuasive arguments that Applicants have met the written description requirement "because the biological activities of IKK-γ encompassed by the claims are not limited to binding activity" (Advisory Action, page2). Although Applicants respectfully disagree that the claims fail to meet the written description requirement, Applicants have amended Claims 11 and 31-34, in order to further the prosecution of the present application and Applicants' business interests, yet without acquiescing to the Examiner's arguments, and while reserving the right to prosecute the original, similar, or broader claims in one or more future application(s). Specifically, Applicants have amended Claim 11 to recite "wherein said polypeptide has a binding activity of a full-length IKK-γ polypeptide" and has amended Claims 31-34 to recite "wherein said binding activity of a full-length IKK-γ polypeptide comprises" interaction with IKK-α/β in cells, IKK-β binding activity, IKK-α binding activity and dimerization or trimerization activity, respectively. Likewise, new Claims 35-37 are limited to nucleic acids encoding IKK-γ deletion derivatives having a binding activity of a full-length IKK-γ polypeptide. Lastly, new Claims 38-40 are limited to nucleic acids encoding IKK-γ polypeptides comprising one or more conservative amino acid changes such that said IKK-γ polypeptide has at least 95% amino acid identity with SEQ ID NO:2.

In addition, Applicants contend one skilled in the art would know that Applicants are in possession of the claimed invention, when the knowledge of one skilled in the art is *combined* with the correlations between function and structure provided in the Specification. For instance in regard to biological activity, Applicants teach that the "human IKK-γ subunit (SEQ ID NO:2) is a polypeptide of 419 amino acids containing coiled-coil and leucine zipper α-helical regions, indicating that IKK-γ can be engaged in homotypic [e.g., IKK-γ dimerization or trimerization activity] and heterotypic [e.g., IKK-α and/or IKK-β binding activity] interactions" (Specification, at page 19, lines 7-11). Specifically as shown in Figures 2B and 2C, human IKK-γ is contemplated to comprise four α-helical regions, the C-terminal most comprising a leucine

zipper motif with leucines at positions 322, 329, 336 and 343. In addition, Applicants teach that the carboxy-terminal residues of IKK-γ comprise a zinc finger motif comprising cysteines at positions 397, 400, 417 and a histidine at position 413 (Specification, at page 11, lines 16-20). Moreover as previously detailed in the Response to Final Office Action received March 13, 2006, Applicants have demonstrated in Example 4, that even significant amino-terminal and carboxyl-terminal truncations (ΔN: deletion of residues 1-133; and ΔC: deletion of residues 301-419) of IKK-γ do not disrupt IKK-α and IKK-β binding activity of the variant IKK-γ polypeptides or their ability to form dimers and/or trimers.

In summary, Applicants believe that the arguments and evidence (e.g., citations to the Specification) along with the claim amendments obviate the written description rejection, and accordingly request that this rejection be withdrawn.

2) The Claims Are Novel

The Examiner has rejected Claim 30 under 35 U.S.C. § 102(a) as allegedly anticipated by Hillier *et al.*, GENBANK Accession No. AA402683 (Hillier). The Examiner states:

> Applicant traverses the 102 rejection of claim 30 by stating that Hillier does not teach or suggest a nucleotide sequence complementary to nucleotides 140-1405 of SEQ ID NO:1 and further argues that Hillier fails to disclose approximately 1.3 kb of the claimed antisense. Applicant appears to be interpreting claim 30 more narrowly than is written. Because claim 30 recites an antisense complementary to "a" nucleotide sequence...[t]he scope of the claims includes polynucleotides having as few as two nucleotides complementary to the recited nucleotide range (Advisory Action, page 2).

Applicants again respectfully disagree that the invention is anticipated by Hillier as Claim 30 recites the phrase "comprising a nucleotide sequence complementary to nucleotides 149 to 1408 SEQ ID NO:1," meaning that the claimed antisense nucleotide must include the complement of 149 to 1408, but may contain additional residues (upstream of 149 and/or downstream of 1408). Nonetheless, Applicants have amended Claim 30, in order to further the prosecution of the present application and Applicants' business interests, yet without acquiescing to the Examiner's arguments, and while reserving the right to prosecute the original, similar, or broader claims in one or more future application(s). Specifically, Applicants have amended Claim 30 to recite

"comprising a nucleotide sequence complementary to nucleotides 149 to 1408 SEQ ID NO:1 in its entirety." As Hillier fails to disclose ~1.3 kb of the claimed antisense polynucleotide, Hillier does not anticipate pending Claim 30. Thus, Applicants request that this rejection be withdrawn.

CONCLUSION

Applicants believe the amendments and arguments set forth above traverse the Examiner's rejections and, therefore request that a timely Notice of Allowance be issued in this case. However, should the Examiner believe that a telephone interview would aid in the prosecution of this application, Applicants encourage the Examiner to call the undersigned collect.

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Christine A. Lekutis
Registration No. 51,934

MEDLEN & CARROLL, LLP
101 Howard Street, Suite 350
San Francisco, CA 94105
415.904.6500